

PURWANCHAL UNIVERSITY

VII SEMESTER FINAL EXAMINATION-2004

LEVEL : B. E. (Civil)

SUBJECT: BEG468CI, Safety Engineering.

TIME: 03:00 hrs

Full Marks: 80

Pass marks: 32

Candidates are required to give their answers in their own words as far as practicable.

All questions carry equal marks. The marks allotted for each sub-question is specified along its side.

Attempt any FIVE questions.

- Q. [1] [a] What are the main principles of hazard control?
Describe in brief. [5]
[b] Describe the ways to survey the attitude of
employee towards the safety. [8]
- Q. [2] [a] State clearly the sources of mechanical hazards.
How do you prevent and control of mechanical
hazards? [8]
[b] Write short notes on (any TWO): [4+4]
[i] Hazards effects of electricity
[ii] Prevention and reduction of noise.
[iii] Areas of radioactive contamination
- Q. [3] [a] Define injury rates, injury frequency rate (IFR) and
injury severity rate (ISR). [8]
[b] 60 numbers of people are working in a factory
and they work 8 hours per day for the total
working 180 days. If the number of injured
workers is 6 calculate the IFR and ISR for 1,00,000
mh. [8]

- Q. [4] [a] What is the effective safety program? Name a
describe main activities for finding and correction
the hazards.
[b] Describe (any TWO):
[i] Self applied standards of safety and health
[ii] Regularity standards
[iii] Health hazards in construction industry
- Q. [5] [a] Describe the relationships of trade union
government's and management's representatives
industrial relation.
[b] Distinguish acceptable and unacceptable risk
safety.
- Q. [6] [a] What are the possible influencing factors with
employees on- safety management? Describe
short.
[b] "Abilities, perception and effort are the major than
things to measure the safety performance to
efficient manager." Prove it.
- Q. [7] [a] Give a clear definition of contract. How do you
explain the efficient contract process in
construction project?
[b] Write short notes on (any TWO):
[i] Likert's theory of supervisor-employee relation
[ii] Control of stress
[iii] Maslow's need theory of motivation.

PURWANCHAL UNIVERSITY

VII SEMESTER FINAL EXAMINATION-2005

LEVEL : B. E. (Civil)

SUBJECT: BEG468CI, Safety Engineering.

TIME: 03:00 hrs

Full Marks: 80

Pass marks: 32

Candidates are required to give their answers in their own words as far as practicable.

All questions carry equal marks. The marks allotted for each sub-question is specified along its side.

Attempt any FIVE questions.

- Q. [1] [a] What do you mean by safety engineering? Describe its importance in construction industry. [8]
[b] How attitude survey is carried out? Explain the conditions in which such survey should not be done. [8]
- Q. [2] [a] What are the major sources of mechanical hazards? List the name of mechanical guards & point out the basic requirements of them. [8]
[b] Distinguish between kinetic energy hazard and potential energy hazard. How they affect on industries? [8]
- Q. [3] [a] What do you mean by injury frequency rate & injury severity rate? What is the importance of it in industries? [8]
[b] Calculate the injury frequency and severity rate of a factory in a year with following data:
No of workers 70
Working hrs per week 40

Injured workers 4

Lost days from work 85

- Q. [4] [a] Explain the activities that a management should do for finding & correcting the hazard. [8]
[b] What is the importance of workers' compensation law? Describe the role of trade union in a factory. [8]
- Q. [5] [a] What do you mean by health & safety standards? Describe the method of preparing voluntary, self-applied standards. [8]
[b] "Every machine/plant should have minimum standards" prove it with brief explanations. [8]
- Q. [6] [a] What is the role of employee in safety management? Explain the influence of training on employees. [8]
[b] "Motivating management is a difficult job". Why is it difficult? Explain in brief. [8]
- Q. [7] [a] What are the various methods of controlling stress? Describe organizational strategy of coping and controlling the stress. [8]
[b] Write short notes on (any TWO): [4+4]
[i] Motivation hygiene theory
[ii] Risk acceptability
[iii] Hazard control